



Eastern Research Group  
601 Keystone Park Drive  
Suite 700  
Morrisville, NC 27560

August 12, 2016

Cary Secrest  
OECA  
1200 Pennsylvania Avenue  
Washington, D.C. 20004  
Project Name: Humphrey Compressor Station

Dear Cary Secrest,

This report contains the analytical results for the sample(s) received under chain(s) of custody by Eastern Research Group on 07/29/16 11:33.

The test results in this report are in compliance with NELAC accreditation requirements for the certified parameters. All analyses were performed as described in the US EPA-approved QAPP, under the contract for UATMP, NATTS, CSATAM, PAMS and NMOC support (US EPA Contract No. EP-D-14-030). This cover page is an integral part of this report, and any exceptions or comments are noted on the last page.

Release of the data contained in this data package and in the data submitted in the electronic data deliverable, has been authorized by the Program Manager, or the Program Manager's designee as verified by the following signature.

The issuance of the final Certificate of Analysis takes precedence over any previous Report. If you have any questions, please contact me at 919-468-7930.

Sincerely,

Laura Van Enwyck  
Task Lead  
[laura.vanenwyck@erg.com](mailto:laura.vanenwyck@erg.com)

The information contained in this report and its attachment(s) are intended only for the use of the individual to whom it is addressed and may contain information that is privileged, confidential, or exempt from disclosure. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this report is strictly prohibited. If you have received this report in error, please notify [laura.vanenwyck@erg.com](mailto:laura.vanenwyck@erg.com) and delete the report without retaining any copies.



## CERTIFICATE OF ANALYSIS

OECA

1200 Pennsylvania Avenue

Washington, D.C. 20004

**ATTN:** Cary Secrest

**PHONE:** (202) 564-8661 **FAX:** (202) 564-0068

**FILE #:** 0352.01.001.831

**REPORTED:** 08/12/16 13:48

**SUBMITTED:** 07/29/16

**AQS SITE CODE:**

**SITE CODE:** Humphrey Compressor Station

### ANALYTICAL REPORT FOR SAMPLES

<u>SampleName</u>	<u>LabNumber</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
Humphrey Compressor	6072905-01	Air	07/26/16 00:00	07/29/16 11:33



# CERTIFICATE OF ANALYSIS

OECA

1200 Pennsylvania Avenue

Washington, D.C. 20004

ATTN: Cary Secrest

PHONE: (202) 564-8661 FAX: (202) 564-0068

FILE #: 0352.01.001.831

REPORTED: 08/12/16 13:48

SUBMITTED: 07/29/16

AQS SITE CODE:

SITE CODE: Humphrey Compressor Station

**Description:** Humphrey Compressor Station **Lab ID:** 6072905-01 **Sampled:** 07/26/16 00:00  
**Pressure @ Receipt:** 4.0"Hg **Canister #:** 3250 **Received:** 07/29/16 11:33  
**Comments:** Produced water tanks **Analyzed:** 08/05/16 03:29

## Air Toxics by EPA Compendium Method TO-15

<u>Analyte</u>	<u>Results</u>		<u>Flag</u>	<u>MDL</u>
	<u>ppbv</u>	<u>ug/m<sup>3</sup></u>		<u>ppbv</u>
Acetylene	ND	ND	U	141
Propylene	ND	ND	U	263
Dichlorodifluoromethane	ND	ND	U	99.3
Chloromethane	ND	ND	U	168
Dichlorotetrafluoroethane	ND	ND	U	152
Vinyl chloride	ND	ND	U	159
1,3-Butadiene	ND	ND	U	128
Bromomethane	ND	ND	U	122
Chloroethane	ND	ND	U	141
Acetonitrile	ND	ND	U	249
Acrolein	ND	ND	U	589
Trichlorofluoromethane	ND	ND	U	101
Acrylonitrile	ND	ND	U	148
1,1-Dichloroethene	ND	ND	U	114
Dichloromethane	ND	ND	U	105
Carbon Disulfide	ND	ND	U	96.3
Trichlorotrifluoroethane	ND	ND	U	84.5
trans-1,2-Dichloroethylene	ND	ND	U	61.4
1,1-Dichloroethane	ND	ND	U	61.4
Methyl tert-Butyl Ether	ND	ND	U	43.2
Chloroprene	ND	ND	U	47.7
cis-1,2-Dichloroethylene	ND	ND	U	69.8
Bromochloromethane	ND	ND	U	63.4
Chloroform	ND	ND	U	57.5
Ethyl tert-Butyl Ether	ND	ND	U	59.5
1,2-Dichloroethane	ND	ND	U	64.9
1,1,1-Trichloroethane	ND	ND	U	71.7
<b>Benzene</b>	<b>98800</b>	<b>316,000.00</b>	<b>D</b>	<b>3160</b>
Carbon Tetrachloride	ND	ND	U	81.1
tert-Amyl Methyl Ether	ND	ND	U	82.1
1,2-Dichloropropane	ND	ND	U	93.4
Ethyl Acrylate	ND	ND	U	132
Bromodichloromethane	ND	ND	U	94.3
Trichloroethylene	ND	ND	U	81.1
Methyl Methacrylate	ND	ND	U	135
cis-1,3-Dichloropropene	ND	ND	U	98.8
Methyl Isobutyl Ketone	ND	ND	U	107
trans-1,3-Dichloropropene	ND	ND	U	132
1,1,2-Trichloroethane	ND	ND	U	101
<b>Toluene</b>	<b>506000</b>	<b>1,910,000.00</b>	<b>D</b>	<b>2490</b>
Dibromochloromethane	ND	ND	U	105

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



# CERTIFICATE OF ANALYSIS

OECA

1200 Pennsylvania Avenue

Washington, D.C. 20004

ATTN: Cary Secrest

PHONE: (202) 564-8661 FAX: (202) 564-0068

FILE #: 0352.01.001.831

REPORTED: 08/12/16 13:48

SUBMITTED: 07/29/16

AQS SITE CODE:

SITE CODE: Humphrey Compressor Station

Description: Humphrey Compressor Station

Lab ID: 6072905-01

Sampled: 07/26/16 00:00

Pressure @ Receipt: 4.0"Hg

Canister #: 3250

Received: 07/29/16 11:33

Comments: Produced water tanks

Analyzed: 08/05/16 03:29

## Air Toxics by EPA Compendium Method TO-15

Analyte	Results		Flag	MDL
	ppbv	ug/m <sup>3</sup>		ppbv
1,2-Dibromoethane	ND	ND	U	103
<b>n-Octane</b>	<b>377000</b>	<b>1,760,000.00</b>	E, D	<b>88.0</b>
Tetrachloroethylene	ND	ND	U	78.1
Chlorobenzene	ND	ND	U	99.8
<b>Ethylbenzene</b>	<b>85500</b>	<b>372,000.00</b>	D	<b>94.3</b>
<b>m,p-Xylene</b>	<b>158000</b>	<b>687,000.00</b>	D	<b>5840</b>
Bromoform	ND	ND	U	119
Styrene	ND	ND	U	101
1,1,2,2-Tetrachloroethane	ND	ND	U	146
<b>o-Xylene</b>	<b>45000</b>	<b>196,000.00</b>	D	<b>2980</b>
<b>1,3,5-Trimethylbenzene</b>	<b>24000</b>	<b>118,000.00</b>	D	<b>115</b>
<b>1,2,4-Trimethylbenzene</b>	<b>27100</b>	<b>133,000.00</b>	D	<b>119</b>
m-Dichlorobenzene	ND	ND	U	118
p-Dichlorobenzene	ND	ND	U	113
o-Dichlorobenzene	ND	ND	U	131
1,2,4-Trichlorobenzene	ND	ND	U	173
Hexachloro-1,3-butadiene	ND	ND	U	205



# CERTIFICATE OF ANALYSIS

OECA

1200 Pennsylvania Avenue

Washington, D.C. 20004

ATTN: Cary Secrest

PHONE: (202) 564-8661 FAX: (202) 564-0068

FILE #: 0352.01.001.831

REPORTED: 08/12/16 13:48

SUBMITTED: 07/29/16

AQS SITE CODE:

SITE CODE: Humphrey Compressor Station

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
---------	--------	-------	---------------	-----	-----------	-------

## Air Toxics by EPA Compendium Method TO-15 - Quality Control

Batch B6H0502 - Summa Canister Prep

### Blank (B6H0502-BLK1)

Prepared: 07/20/16 Analyzed: 08/04/16

Acetylene	ND	ppbv				U
Propylene	ND	ppbv				U
Dichlorodifluoromethane	ND	ppbv				U
Chloromethane	ND	ppbv				U
Dichlorotetrafluoroethane	ND	ppbv				U
Vinyl chloride	ND	ppbv				U
1,3-Butadiene	ND	ppbv				U
Bromomethane	ND	ppbv				U
Chloroethane	ND	ppbv				U
Acetonitrile	ND	ppbv				U
Acrolein	ND	ppbv				U
Trichlorofluoromethane	ND	ppbv				U
Acrylonitrile	ND	ppbv				U
1,1-Dichloroethene	ND	ppbv				U
Dichloromethane	ND	ppbv				U
Carbon Disulfide	ND	ppbv				U
Trichlorotrifluoroethane	ND	ppbv				U
trans-1,2-Dichloroethylene	ND	ppbv				U
1,1-Dichloroethane	ND	ppbv				U
Methyl tert-Butyl Ether	ND	ppbv				U
Chloroprene	ND	ppbv				U
cis-1,2-Dichloroethylene	ND	ppbv				U
Bromochloromethane	ND	ppbv				U
Chloroform	ND	ppbv				U
Ethyl tert-Butyl Ether	ND	ppbv				U
1,2-Dichloroethane	ND	ppbv				U
1,1,1-Trichloroethane	ND	ppbv				U
Benzene	ND	ppbv				U
Carbon Tetrachloride	ND	ppbv				U
tert-Amyl Methyl Ether	ND	ppbv				U
1,2-Dichloropropane	ND	ppbv				U
Ethyl Acrylate	ND	ppbv				U
Bromodichloromethane	ND	ppbv				U
Trichloroethylene	ND	ppbv				U
Methyl Methacrylate	0.039	ppbv				
cis-1,3-Dichloropropene	ND	ppbv				U
Methyl Isobutyl Ketone	ND	ppbv				U

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



## CERTIFICATE OF ANALYSIS

OECA

1200 Pennsylvania Avenue

Washington, D.C. 20004

ATTN: Cary Secrest

PHONE: (202) 564-8661 FAX: (202) 564-0068

FILE #: 0352.01.001.831

REPORTED: 08/12/16 13:48

SUBMITTED: 07/29/16

AQS SITE CODE:

SITE CODE: Humphrey Compressor Station

Analyte	Result	Units	Source Result	RPD	RPD Limit	Notes
---------	--------	-------	---------------	-----	-----------	-------

### Air Toxics by EPA Compendium Method TO-15 - Quality Control

Batch B6H0502 - Summa Canister Prep

#### Blank (B6H0502-BLK1) Continued

Prepared: 07/20/16 Analyzed: 08/04/16

trans-1,3-Dichloropropene	ND	ppbv				U
1,1,2-Trichloroethane	ND	ppbv				U
Toluene	ND	ppbv				U
Dibromochloromethane	ND	ppbv				U
1,2-Dibromoethane	ND	ppbv				U
n-Octane	ND	ppbv				U
Tetrachloroethylene	ND	ppbv				U
Chlorobenzene	ND	ppbv				U
Ethylbenzene	ND	ppbv				U
m,p-Xylene	ND	ppbv				U
Bromoform	ND	ppbv				U
Styrene	ND	ppbv				U
1,1,2,2-Tetrachloroethane	ND	ppbv				U
o-Xylene	ND	ppbv				U
1,3,5-Trimethylbenzene	ND	ppbv				U
1,2,4-Trimethylbenzene	ND	ppbv				U
m-Dichlorobenzene	ND	ppbv				U
p-Dichlorobenzene	ND	ppbv				U
o-Dichlorobenzene	ND	ppbv				U
1,2,4-Trichlorobenzene	ND	ppbv				U
Hexachloro-1,3-butadiene	ND	ppbv				U



# CERTIFICATE OF ANALYSIS

OECA

1200 Pennsylvania Avenue

Washington, D.C. 20004

ATTN: Cary Secrest

PHONE: (202) 564-8661 FAX: (202) 564-0068

FILE #: 0352.01.001.831

REPORTED: 08/12/16 13:48

SUBMITTED: 07/29/16

AQS SITE CODE:

SITE CODE: Humphrey Compressor Station

Analyte	Result	Units	% Difference	Limit (%)	Notes
---------	--------	-------	--------------	-----------	-------

## Air Toxics by EPA Compendium Method TO-15 - Quality Control

Sequence 1608013

### Calibration Check (1608013-CCV1)

Prepared & Analyzed: 08/04/16

Acetylene	2.56	ppbv	-6.5	30.00
Propylene	2.38	ppbv	-6.9	30.00
Dichlorodifluoromethane	2.76	ppbv	6.2	30.00
Chloromethane	2.46	ppbv	-7.3	30.00
Dichlorotetrafluoroethane	2.84	ppbv	8.2	30.00
Vinyl chloride	2.45	ppbv	-6.3	30.00
1,3-Butadiene	2.64	ppbv	1.5	30.00
Bromomethane	2.65	ppbv	4.2	30.00
Chloroethane	2.56	ppbv	-4.0	30.00
Acetonitrile	2.25	ppbv	-15.3	30.00
Acrolein	2.17	ppbv	-3.2	30.00
Trichlorofluoromethane	2.77	ppbv	6.5	30.00
Acrylonitrile	2.61	ppbv	0.8	30.00
1,1-Dichloroethene	2.76	ppbv	1.8	30.00
Dichloromethane	2.60	ppbv	0.7	30.00
Carbon Disulfide	2.52	ppbv	3.8	30.00
Trichlorotrifluoroethane	2.87	ppbv	11.7	30.00
trans-1,2-Dichloroethylene	2.56	ppbv	5.8	30.00
1,1-Dichloroethane	2.45	ppbv	-5.7	30.00
Methyl tert-Butyl Ether	2.59	ppbv	-1.0	30.00
Chloroprene	1.08	ppbv	-1.6	30.00
cis-1,2-Dichloroethylene	2.44	ppbv	-6.3	30.00
Bromochloromethane	2.63	ppbv	3.8	30.00
Chloroform	2.66	ppbv	5.5	30.00
Ethyl tert-Butyl Ether	2.52	ppbv	-3.7	30.00
1,2-Dichloroethane	2.68	ppbv	7.0	30.00
1,1,1-Trichloroethane	2.25	ppbv	-16.0	30.00
Benzene	2.16	ppbv	-14.2	30.00
Carbon Tetrachloride	2.62	ppbv	2.9	30.00
tert-Amyl Methyl Ether	2.17	ppbv	-16.7	30.00
1,2-Dichloropropane	2.15	ppbv	-16.5	30.00
Ethyl Acrylate	2.27	ppbv	-14.6	30.00
Bromodichloromethane	2.20	ppbv	-12.9	30.00
Trichloroethylene	2.42	ppbv	-8.9	30.00

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



## CERTIFICATE OF ANALYSIS

OECA

1200 Pennsylvania Avenue

Washington, D.C. 20004

ATTN: Cary Secrest

PHONE: (202) 564-8661 FAX: (202) 564-0068

FILE #: 0352.01.001.831

REPORTED: 08/12/16 13:48

SUBMITTED: 07/29/16

AQS SITE CODE:

SITE CODE: Humphrey Compressor Station

Analyte	Result	Units	% Difference	Limit (%)	Notes
---------	--------	-------	--------------	-----------	-------

### Air Toxics by EPA Compendium Method TO-15 - Quality Control

Sequence 1608013

#### Calibration Check (1608013-CCV1) Continued

Prepared & Analyzed: 08/04/16

Methyl Methacrylate	2.05	ppbv	-22.3	30.00
cis-1,3-Dichloropropene	2.34	ppbv	-10.0	30.00
Methyl Isobutyl Ketone	2.05	ppbv	-20.6	30.00
trans-1,3-Dichloropropene	2.21	ppbv	-11.5	30.00
1,1,2-Trichloroethane	2.21	ppbv	-12.5	30.00
Toluene	2.42	ppbv	-4.5	30.00
Dibromochloromethane	2.47	ppbv	-2.9	30.00
1,2-Dibromoethane	2.39	ppbv	-6.6	30.00
n-Octane	2.18	ppbv	-16.0	30.00
Tetrachloroethylene	2.50	ppbv	-6.0	30.00
Chlorobenzene	2.46	ppbv	-6.7	30.00
Ethylbenzene	2.48	ppbv	-5.5	30.00
m,p-Xylene	5.52	ppbv	-3.1	30.00
Bromoform	2.35	ppbv	-7.7	30.00
Styrene	2.32	ppbv	-3.6	30.00
1,1,2,2-Tetrachloroethane	2.17	ppbv	-14.6	30.00
o-Xylene	2.57	ppbv	-1.0	30.00
1,3,5-Trimethylbenzene	2.17	ppbv	-12.0	30.00
1,2,4-Trimethylbenzene	2.09	ppbv	-13.1	30.00
m-Dichlorobenzene	2.20	ppbv	-13.9	30.00
p-Dichlorobenzene	2.60	ppbv	-13.5	30.00
o-Dichlorobenzene	2.13	ppbv	-15.6	30.00
1,2,4-Trichlorobenzene	1.93	ppbv	-15.5	30.00
Hexachloro-1,3-butadiene	2.18	ppbv	-13.9	30.00

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.





## CERTIFICATE OF ANALYSIS

OECA

1200 Pennsylvania Avenue

Washington, D.C. 20004

**ATTN:** Cary Secrest

**PHONE:** (202) 564-8661 **FAX:** (202) 564-0068

**FILE #:** 0352.01.001.831

**REPORTED:** 08/12/16 13:48

**SUBMITTED:** 07/29/16

**AQS SITE CODE:**

**SITE CODE:** Humphrey Compressor Station

### Notes and Definitions

U	Under Detection Limit
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
D	This result obtained by dilution.
ND	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reported
MDL	Method Detection Limit
RPD	Relative Percent Difference

Note: The test results meet all requirements of NELAC; however the following analytes are not accredited: 1,2,4-trimethylbenzene, 1,2-dibromoethane, 1,2-dichloropropane, 1,3,5-trimethylbenzene, 1,3-butadiene, acetylene, acrolein, bromochloromethane, bromodichloromethane, bromoform, carbon disulfide, dibromochloromethane, dichlorodifluoromethane, dichlorotetrafluoroethane, ethyl acrylate, ethyl tert butyl ether, hexachloro-1,3-butadiene, octane, propylene, tert amyl methyl ether, tetrachloroethylene, tran-1,2-dichloroethylene, trichlorofluoromethane, and trichlorotrifluoroethane.